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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,671	08/08/2006	Ulrich Riegel	29827/42222	9953
4743 7590 01/21/2010 MARSHALL, GERSTEIN & BORUN LLP 233 SOUTH WACKER DRIVE 6300 SEARS TOWER CHICAGO, IL 60606-6357			EXAMINER RABAGO, ROBERTO	
			ART UNIT	PAPER NUMBER
			1796	
			MAIL DATE	DELIVERY MODE
			01/21/2010	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/588,671

**Applicant(s)**

RIEGEL ET AL.

**Examiner**

Roberto Rábago

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 November 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 1-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/22)
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date 5/14/07

## DETAILED ACTION

### *Election/Restrictions*

1. Applicants' election with traverse of claims 21-26 in the reply filed on 11/3/2009 is acknowledged. Applicants' traversal arguments are not found persuasive for the following reasons.

Applicants argue that a special technical feature exists in all of the claims; however, this argument is incorrect. A product-by-process claim is not a true dependent claim because it does not include the process features, only the structure imparted to the product by said process. Furthermore, none of the process claims recite the additional properties set forth in the product claims. Therefore, the only common feature between the process claims and the product claims is that of the polymer set forth in claim 1, which is a  $\geq 50\%$  neutralized post-crosslinked water absorbing polymer comprising concentrations of post-crosslinker and polyvalent cation within the specified ranges. This polymer cannot be a "special technical feature" within the meaning of the rule because it does not define a contribution over the art (i.e., it is either obvious or not novel) in view of the numerous "X" references cited against the claims in the ISR and further explained in the International Preliminary Examination Report, and the additional references cited against the product claims below.

Applicants further argue that unity of invention exists because all claims were searched in the International Search Report. However, no opinions or findings expressed during PCT examination are binding on subsequent U.S. national stage

prosecution. A finding of lack of unity of invention, when proper, is always discretionary, and the fact that the PCT examiner chose not to make such a finding is irrelevant in this application.

Regarding applicants' comments on separate classification, such basis for restriction was not made because it is not a proper restriction basis in an application filed under 35 USC 371, and therefore no comment on classification status will be made here.

Regarding applicants' argument that the two groups are so closely related that essentially the same search would be done, this argument is incorrect. As stated above, the process features are not required elements of the product claims, and therefore need not be disclosed in prior art effective against the product claims. Furthermore, the additional limitations of the product claims are not found in the process claims, and therefore need not be disclosed in prior art effective against the process claims. Accordingly, the location and application of prior art against the two claim sets would be substantially different, and therefore serious burden exists.

The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 21-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The product is made by the process recited in claim 1, which states that the amount of postcrosslinker on the polymer is 0.01-0.5 wt%, and the amount of polyvalent cation on the polymer is 0.001-0.5 wt%. However, since it is known in the art that polyvalent cation itself may be used as a postcrosslinking agent for absorbent polymers (see US 2002/0165288, [0048] and [0056]), the claims are indefinite because it cannot be determined whether the crosslinking agent is intended to be a moiety distinct from a polyvalent cation, or whether the crosslinking agent may also be a polyvalent cation.

***Claim Rejections - 35 USC § 102 and/or 103***

4. Claims 21 and 24-26 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Frenz et al. (US 2002/0128618).

The reference discloses in Example 1 an NaOH-neutralized polyacrylic acid absorbent material which has been ground, classified to 100-850  $\mu\text{m}$ , and treated with 0.01 wt% organic crosslinking agent. The material is then used in Example 5, wherein the polymer is treated with 0.1 wt% aluminum sulfate. The resulting polymer has the required SFC and absorbency, but has not reported the specific particle size distribution. However, applicants' claimed range requiring 80% of particles between 150-600  $\mu\text{m}$  is within the expected range of particles obtained by conventional grinding

procedures which are then followed by classification to 100-850  $\mu\text{m}$ , and therefore the claimed distribution would appear to be inherent in the cited example. Regarding claim 26, the claimed absorbency under load would be expected to be inherent because the AUL of the precursor polymer in Example 1 is 26.4 g/g. The burden of proof is shifted to applicants to show that cited example 5 fails to include the claimed unreported properties. In the alternative, obtaining the claimed particle size distribution would be obvious by ordinary adjustments in the conventional grinding process disclosed in the reference.

It is noted that the reference has made the absorbent polymer by a different method than that stated in the product-by-process claims. However, the record contains no basis to conclude that the reference product would be outside the broad scope of the claims.

5. Claims 21-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frenz et al. (US 2002/0128618) in view of Hermeling et al. (US 2004/0265387).

Frenz discloses in Example 1 an NaOH-neutralized polyacrylic acid absorbent material which has been ground, classified to 100-850  $\mu\text{m}$ , and treated with 0.01 wt% organic crosslinking agent. The material is then used in Example 5, wherein the polymer is treated with 0.1 wt% aluminum sulfate. The resulting polymer has the required SFC and absorbency, but has not reported the particle size distribution and does not disclose further classification. However, classifying superabsorbent particles for the purpose of obtaining a desired set of properties is well known in the art, and

therefore obtaining the claimed particle size would be obvious. The general trend when balancing the properties of particle size, absorbency and SFC is disclosed in Hermeling at [0021], which shows that as particle size decreases, absorbency rises and SFC falls. Therefore, it would be obvious to further classify the polymer of Frenz to within the range of 180-500  $\mu\text{m}$  as disclosed in Hermeling because such use is a conventional method for obtaining a desired combination of absorbency and SFC.

Regarding claim 26, the claimed absorbency under load would be expected to be inherent because the AUL of the precursor polymer in Example 1 is 26.4 g/g. The burden of proof is shifted to applicants to show that cited example 5 fails to include the claimed property of AUL.

It is noted that Frenz has made the absorbent polymer by a different method than that stated in the product-by-process claims. However, the record contains no basis to conclude that the reference product would be outside the broad scope of the claims.

#### ***Discussion of References Cited on International Search Report***

6. The references cited on the ISR do not anticipate or render obvious instant claims 21-26 because none discloses or reasonably suggests the instant polymer which has the stated SFC, particle size, and  $< 0.5 \text{ wt\%}$  of a crosslinker and a polyvalent metal. Specifically, US 6,620,889 is stated in the IPER to be the closest prior art, but this reference only shows polymers having either insufficient SFC or excessive amounts of crosslinker. Reference examples 28 and 29 are the only examples which have the required amount of crosslinker, yet these have inadequate SFC. Also cited in the ISR is

US 5,599,335; however, the reference examples which have the required SFC also include excessive amounts of crosslinker and no polyvalent cation.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberto Rábago whose telephone number is (571) 272-1109. The examiner can normally be reached on Monday - Friday from 8:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roberto Rábago/  
Primary Examiner  
Art Unit 1796

RR  
January 19, 2010